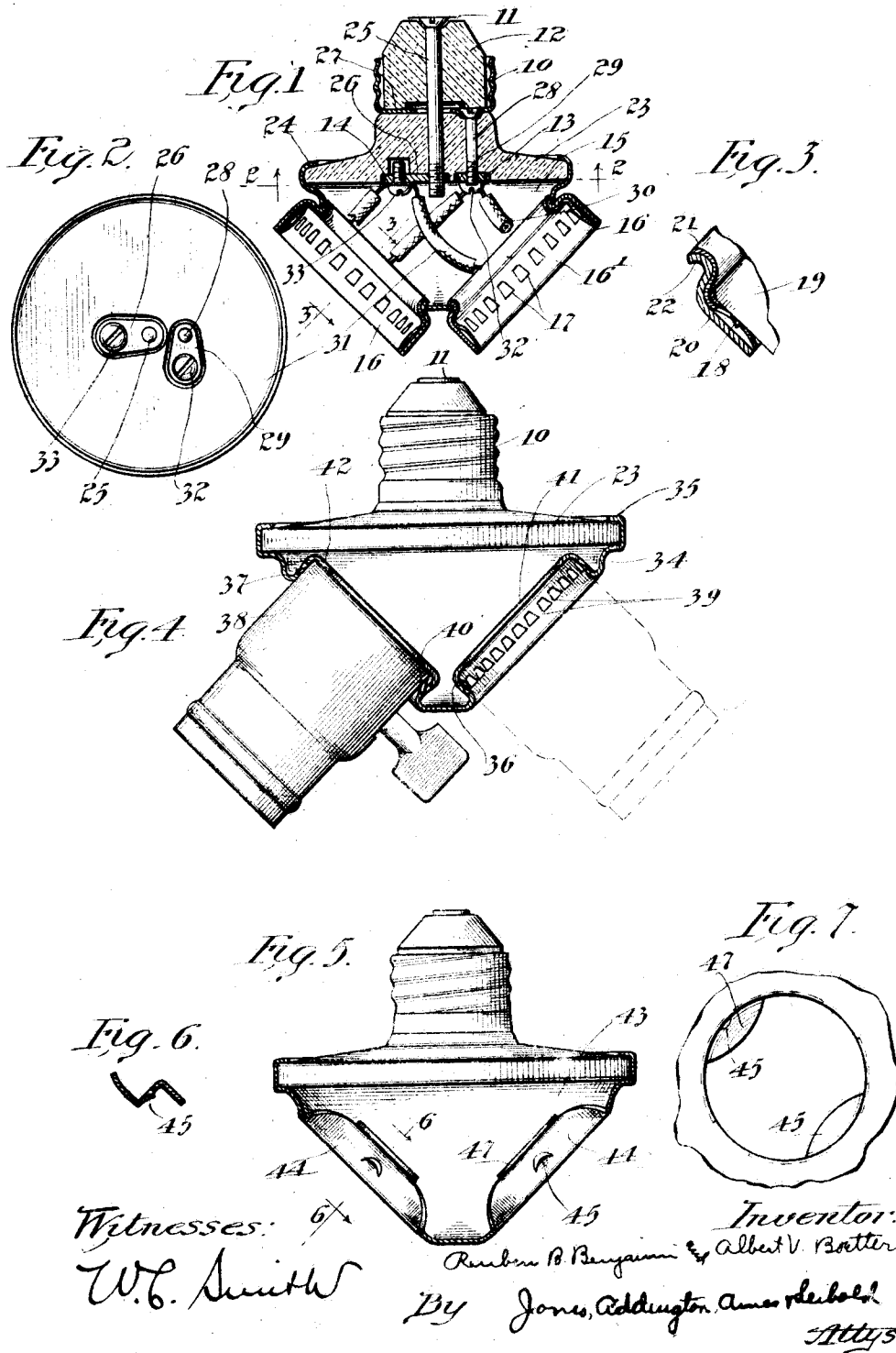


R. B. BENJAMIN AND A. V. BOETTER.
ELECTRICAL CONNECTOR DEVICE.
APPLICATION FILED MAY 4, 1918.

1,379,244.

Patented May 24, 1921.

2 SHEETS—SHEET 1.

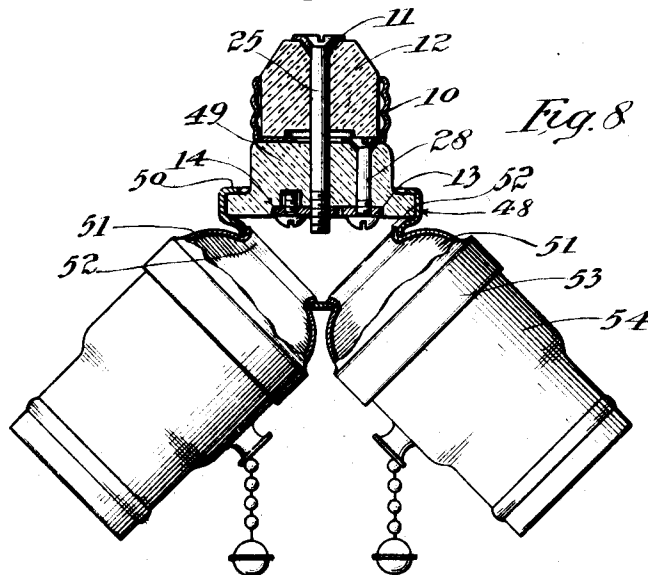
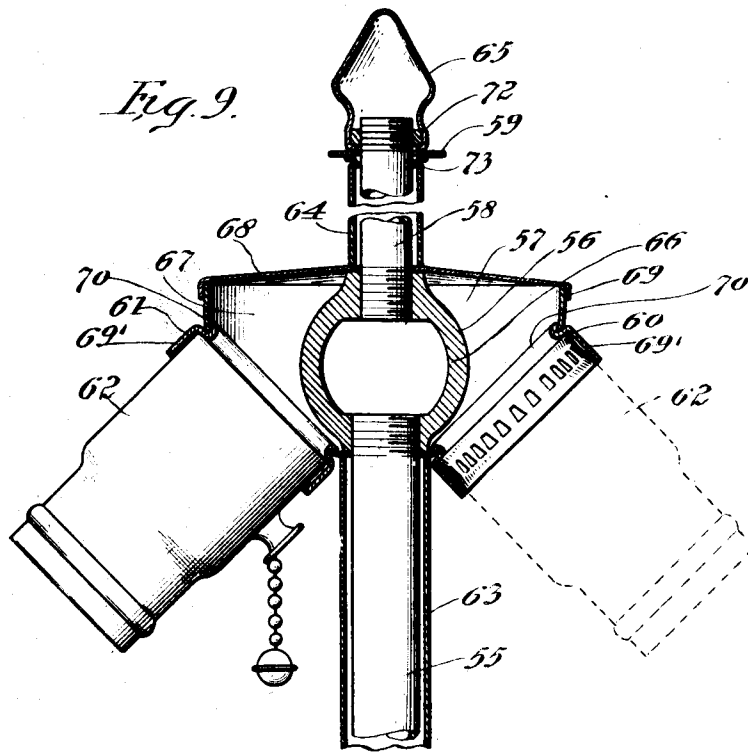


R. B. BENJAMIN AND A. V. BOETTER.
ELECTRICAL CONNECTOR DEVICE.
APPLICATION FILED MAY 4, 1918.

1,379,244.

Patented May 24, 1921.

2 SHEETS—SHEET 2.



Witnesses:
W. C. Smith

Inventor
R. B. Benjamin & Albert V. Boetter
By Jones, Addington, Ames & Schold
Attys.

UNITED STATES PATENT OFFICE.

REUBEN B. BENJAMIN AND ALBERT V. BOETTER, OF CHICAGO, ILLINOIS, ASSIGNORS
TO BENJAMIN ELECTRIC MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A
CORPORATION OF ILLINOIS.

ELECTRICAL-CONNECTOR DEVICE.

1,379,244.

Specification of Letters Patent.

Patented May 24, 1921.

Application filed May 4, 1918. Serial No. 232,436.

To all whom it may concern:

Be it known that we, REUBEN B. BENJAMIN and ALBERT V. BOETTER, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electrical-Connector Devices, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Our invention relates to electrical connector devices.

Among the objects of our invention are to provide an improved electrical connector device in which a plurality of receptacles may be supplied with current from a single outlet, which construction will be easy to manufacture, durable in use, and efficient in operation. Further objects will appear from the detailed description to follow and from the appended claims.

In the drawings, in which several embodiments of our invention are shown—

Figure 1 is an axial section of a plug socket embodying our invention;

Fig. 2 is a section on the line 2—2 of Fig. 1;

Fig. 3 is a section on the line 3—3 of Fig. 1;

Fig. 4 is an axial section of another form of our invention;

Fig. 5 is an axial section of still another form;

Fig. 6 is a section on the line 6—6 of Fig. 5;

Fig. 7 is a fragmentary view showing the opening for receiving one of the socket shells;

Fig. 8 is an axial section of another form of plug socket; and

Fig. 9 is an axial section showing a stand-lamp embodying our invention.

Referring now in detail to the form of our invention shown in Figs. 1, 2, and 3, the connector here shown is designed so it can be screwed into an Edison socket and has provision whereby the shells of standard sockets may be detachably connected thereto and electrically connected with the contacts of the parts which screw into the Edison socket.

The connector comprises shell and center contacts 10 and 11, respectively, for engage-

ment with the corresponding contacts of an Edison socket, an insulating base or support 12 for insulating the contacts 10 and 11 from each other and for supporting these contacts, binding-terminals 13 and 14, electrically connected with the contacts 10 and 11, respectively, a sheet-metal supporting and housing member 15 for housing the binding-terminals 13 and 14 and the conductors connected therewith and for supporting the connections for the socket shells, and a pair of annular sheet-metal connecting members 16 with which the shells of standard sockets may be detachably connected. The annular connecting members 16 may be designed to connect with any standard socket shell; they may be formed of two sheet-metal rings, the inner ring having an annular series of openings 17 to receive struck-up lugs 18 on the socket shell 19. The outer ring 20 is a finishing member.

The rings 16¹ and 20 may be secured together and to the supporting member 15 by being inserted through an opening in the member 15 and flanged over, as indicated at 21 and 22. The supporting member 15 is secured to an insulating base 23 by being flanged over as indicated at 24.

The center contact 11 is held in place on the base 12, and the bases 12 and 23 are held together, by means of the screw 25, which extends through registering openings in the center contact 11 and the insulating bases 12 and 23 and is threaded into the binding-plate 26 of the binding-terminal 14, the screw 25 thus serving to electrically connect the center contact 11 and binding-terminal 14. This screw 25 also clamps the flange 27 of the shell contact 10 between the insulating bases 12 and 23, and thus holds the shell contact 10 firmly in position. The shell contact 10 is electrically connected with the binding-terminal 13 by means of a screw 28, which extends through registering openings in the flange 27 and insulating base 23 and is threaded into the binding-plate 29 of the binding-terminal 13.

One binding-terminal of each of the sockets secured in the connecting members 16 is connected to the binding-terminal 13, and the other binding-terminal of each of the sockets is connected to the binding-terminal 14. This is accomplished by baring the intermediate portions of two insulated

conductors 30 and 31 and securing the bared portions underneath the heads of the screws 32 and 33, respectively, of the binding-terminals 13 and 14. The extremities of the

conductors 30 and 31 are bared, and these bared extremities are secured to the binding-terminals of the sockets.

In using our improved device, the cap can be detached from ordinary sockets, or the sockets can be procured without the caps and the shells of the sockets can then be secured in the connecting members 16 in the same manner in which they are secured to the caps, the connection with the binding-terminals of course being made before the mechanical connection with the connecting members 16 is made. One terminal of each socket will be connected with the binding-terminal 13, which is connected with the shell contact of the plug portion, and the other binding-terminal of each of the sockets will be connected with the binding-terminal 14, which is electrically connected with the center contact 11 of the plug portion.

In the form of our invention shown in Fig. 4, the shell and center contacts 10 and 11, the insulating base 12, the binding-terminals 13 and 14, and the insulating base 23 may be substantially the same as in the form just described. In this form, however, the connection with the standard socket shells is made somewhat differently. A connecting and supporting member 34 formed of sheet-metal is secured to the insulating base 23 by being flanged over it, as indicated at 35, this sheet-metal connecting member being provided with two integral annular inwardly-extending portions 36 and 37, into which the end of the socket shell 38 is inserted. The annular portions 36 and 37 may be provided with an annular series of openings 39 for engagement with lugs 40 on the shells 38. The annular portions 36 and 37 may be provided with flanges or shoulders 41 and 42, respectively, for engaging the inner edges of the socket shells 38 and for positioning the sockets.

The construction of the form of our invention shown in Figs. 5, 6, and 7 is substantially the same as the construction shown in Fig. 4 except that the connection with the socket shell is made somewhat differently. In this form the supporting and connecting member 43 has two pairs of inwardly-extending arcuate ears 44, each provided with an inwardly-extending lug 45 for engagement with a correspondingly-shaped opening in the metal shell of the lamp-socket. Each ear 44 is also provided with an inwardly-extending top or projection 47 for engagement with the upper edge of the shell of the socket for positioning the socket shell.

In the form of our invention shown in

Fig. 8, the shell and center contacts 10 and 11, insulating base 12, the binding-terminals 13 and 14, and the screws 25 and 28 may be the same as in Fig. 1. In this form a supporting and connecting member 48 is secured to the insulating base 49 by being flanged over, as indicated at 50, and a pair of caps 51 are secured to the supporting member 48 by being flanged over the edges of openings in the member 48, as indicated at 52.

The construction of that part 53 of the cap 51 which engages the shell 54 of the socket may be the same construction as is employed in the ordinary cap, with which the shell 54 is designed to engage.

In Fig. 9 our invention is shown in connection with a stand-lamp having a plurality of sockets. This stand-lamp construction comprises a tubular upright supporting member 55 for supporting the socket and associated parts and affording a passage for the conductors which supply current to the socket, a spacing and supporting member 56 into which the upper end of the supporting member 55 is screwed, a housing and supporting construction 57 supported by the members 55 and 56, an upright supporting member 58 screwed into the upper end of the member 56 for supporting a shade-holder 59, a pair of annular connecting members 60 and 61 secured to the supporting construction 57 and connecting the sockets 62, and positioning and finishing members 63, 64, and 65 for giving a finished appearance to the construction and for holding the parts in position.

The support 55 may be a piece of metal plate. The spacing member 56 may be provided with openings 66 for the passage of the conductors to the sockets. The member 57 may comprise a hemispherical sheet-metal shell 67 having an opening through which the support 55 extends and held in place on said support between the members 63 and 56, and a cover portion 68 having a flange portion 69 extending down over the hemispherical portion 67 and having an opening through which the tubular member 58 extends and held in place between the members 56 and 64. Annular connecting members 69' are secured to the hemispherical portion 67, these connecting members 69' extending through openings in the hemispherical portion 67 and being secured thereto by being flanged over, as indicated at 70.

The connection between the connecting members 69' and the socket shells may be the same as the connection between the ordinary cap and the socket shell.

The finishing member 65 may comprise a hollow sheet-metal portion 71 and a nut 72 to which the sheet-metal portion 71 is secured, the nut 72 being threaded onto the upper end of the upright supporting mem-

ber 58. The shade-supporting member 59 is clamped in place between the nut 72 and the finishing member 64.

A positioning washer 73 is placed between the shade-supporting member 59 and the member 64. The finishing and spacing members 63 and 64 may be sections of brass tubing.

We claim as new and desire to secure by Letters Patent of the United States:

1. A stand lamp comprising a tubular vertical support forming a passage for the conductors, a bowl-shaped metal member secured to said vertical support into which the conductors lead, said bowl-shaped member having a plurality of circular openings therein, a plurality of lamp sockets, each having a substantially cylindrical casing, and means for connecting each of said sockets to said bowl-shaped metal member, comprising an integral tubular sheet metal member having a portion flanged over the edge

of one of said openings, and a flange portion surrounding said socket casing and having a detachable connection therewith.

2. An electrical connector device comprising an axially extending supporting member, a bowl-shaped metal member secured to said supporting member, said bowl-shaped member having a plurality of circular openings therein, a plurality of lamp sockets, one for each of said openings, each having a substantially cylindrical casing, and means for securing each of said sockets to said bowl-shaped metal member, comprising an integral tubular sheet metal member having a portion flanged over the edge of said circular opening, and a flange portion surrounding the cylindrical casing of the lamp socket and detachably connected therewith.

In witness whereof, we have hereunto subscribed our names.

REUBEN B. BENJAMIN.
ALBERT V. BOETTER.